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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
COLBERT, ELLA	
ART UNIT	**PAPER NUMBER**
3624	

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/349,198	PARKER, CHRISTOPHER F.	
	Examiner	Art Unit	
	Ella Colbert	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 12-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5 and 6* is/are allowed.

6)☒ Claim(s) *1-4 and 12-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims 1-6 and 12-20 are pending. Claims 5, 6, 17, and 19 have been amended in this communication filed 06/21/04 entered as Amendment.

2. The 35 U.S.C 112, second paragraph rejection for claims 1 and 6 has been overcome by Applicant's convincing argument and is hereby withdrawn.

3. The 35 U.S.C. 112, second paragraph rejection for claims 12 and 17 still remains.

4. The claim objection for claims 17 and 19 has been overcome by the amendment to claims 17 and 19 and is hereby withdrawn.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 12 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 12, consider adding some of the same claim limitations as suggested above for claim 1 and after "receiving" and before "a" add "from the computer". In claim 17, it is suggested after "A" and before "method" to add "computer implemented method" and in line 3 after "receiving" and before "a" add "at the computer".

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-4 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,721,915) Sockut et al, hereafter Sockut in view of (US 5,517,641) Barry et al, hereinafter Barry.

With respect to claim 1, Sockut teaches, a database table recovery system (col. 1, lines 20-33 and col. 9, lines 19-22) the database table recovery system operable to retrieve a backup copy of a tablespace and to apply updates to the backup copy from a log associated with a database table, and to restore the database table associated with the tablespace from the updated backup copy without recovering the tablespace (col. 2, lines 4-11, col. 3, lines 61-67, and col. 4, lines 1-17).

Sockut fails to teach, a tablespace access system coupled to the table recovery system, the tablespace access system is operable to restrict access to the tablespace to read-only access.

Barry teaches, a tablespace access system coupled to the table recovery system, the tablespace access system is operable to restrict access to the tablespace to read-only access (col. 2, lines 65-67 and col. 3, lines 1-12 and lines 34-40). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a tablespace access system coupled to the table recovery system, the tablespace access system is operable to restrict access to the tablespace to read-only access and

in view of Sockut's teachings in col. 8, lines 57-67, col. 9, lines 1-18 and lines 37-44 of database performance and to modify in Sockut because such a modification would allow Sockut's system to have independent recovery of the data and indexes and a significant decrease in elapsed time since the log file updates are done for all objects in the database through the log file.

With respect to claim 2, Sockut teaches. the table recovery system further comprises a log record sorter system operable to sort log records from the log (col. 7, lines 25-36).

With respect to claim 3, Sockut teaches, a data page updater system coupled to the log record sorter system operable to apply log record updates to the backup copy (col. 7, lines 37-62).

With respect to claim 4, Sockut teaches, a data page scanner system coupled to the data page updater system, the data page scanner system operable to locate records associated with the database table in at least one data page (col. 11, lines 41-67 and col. 12, lines 1-11).

With respect to claim 12, Socket teaches, receiving a backup copy of the tablespace having one or more database tables (col. 9, lines 19-32), reading log records associated with a first database table in the one or more database tables (col. 4, lines 5-11), applying the log records to the backup copy without modifying the configuration of the tablespace (col. 4, lines 22-29), building new table data pages from the backup copy (col. 14, lines 66-67), scanning the new table data pages for records of the first database table (col. 11, lines 52-66), and updating the first database table from the records (col. 14, lines 12-22). Sockut failed to teach, reading log records associated with a first database table in the one or more database tables, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to read

log records associated with a first table in the one or more tables and to modify in Sockut because such a modification would allow the data to be read and updated in the first table before it is copied to the new table/tables and a backup copy is made of the data pages.

With respect to claim 13, Sockut failed to teach, limiting access of the second table to the tablespace to read-only before the first table is updated and the second table depends on the tablespace.

Barry teaches, limiting access of the second table to the tablespace to read-only before the first table is updated and the second table depends on the tablespace (col. 5, lines 12-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to limit access of the second table to the tablespace to read-only before the first table is updated and the second table depends on the tablespace and to modify in Sockut because such a modification would allow Sockut to have the capability of retrieving the tablespace but not being able to change it prior to the first table being updated. It is well known in the art that a read-only document can be displayed or printed but not altered in any way; read-only memory (ROM) holds programs that cannot be changed.

With respect to claim 14, Sockut failed to teach, providing update access to the second table after the first table is updated

Barry teaches, providing update access to the second table after the first table is updated (col. 4, lines 19-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide update access to the second table after the first table is updated and to modify in Sockut because such a modification would allow the second table to be updated in successive order since the first table is first to receive the update with the second table following which is in chronological

order. Relational database management systems usually work with two data tables at the same time, relating the information or data through links established by a common column or field. A tablespace stores one or more tables containing file pages.

With respect to claim 15, Sockut teaches, sorting the log records (col. 12, lines 51-65).

With respect to claim 16, Sockut teaches, deleting the rows (col. 9, lines 64-67). Sockut failed to teach, locking the indices.

Barry teaches, locking the indices (col. 7, lines 10-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to lock the indices and to modify in Sockut because such a modification would eliminate the space needed for the indices and the time needed for accessing the indices.

With respect to claim 17, Sockut teaches, building one or more table data pages from the backup copy having the log records applied (col. 3, line 61-67 and col. 4, lines 1-30); selecting one or more records from the one or more database table data pages, the one or more records belonging to the first database table (col. 5, lines 56-67 and col. 6, lines 1-34); updating the first database table with the one or more records selected from the one or more table data pages while allowing access to the rest of the one or more database tables in the tablespace (col. 6, lines 35-50); and wherein the first database table can be recovered without having to recover the tablespace entirely (col. 7, lines 13-56).

This independent claim is rejected for the similar rationale given for claim 12.

With respect to claim 18, Socket teaches, allowing at least one or more tables to have update access to the tablespace when the first table is restored (col. 12, lines 18-25).

With respect to claim 19, Socket teaches, deleting all of the rows of the first database table (col. 9, lines 64-67). Sockut fails to teach, locking out access to indices in the first database table. Barry teaches, locking out access to indices in the first database table (col. 7, lines 52-67 and col. 8, lines 1-4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to lock out access to indices in the first database table and to modify in Sockut because such a modification would eliminate the space needed for the indices (index) and the time needed for accessing the indices (index).

With respect to claim 20, Socket teaches, reading the log records from the log record file to a log record workspace (col. 4, lines 5-11), sorting the log records (col. 4, lines 11-17), and applying the log records to the tablespace backup copy (col. 4, lines 22-29 and col. 9, lines 19-22).

Allowable Subject Matter

9. Claims 5 and 6 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: Applicant's page row extractor system coupled to the data page scanner system operable to extract page rows from the at least one data page that has been located by the data page scanner system in claim 5 and the table row inserter system coupled to the page row extractor system operable to write extracted page rows to the database table, was not disclosed, made obvious or fairly suggested by the prior art of record.

Response to Arguments

11. Applicant's arguments filed 06/21/04 have been fully considered but they are not persuasive.

Issue no. 1; Applicant argues: Claim 17 recites "A method for recovering a database table that depends on a tablespace ..." and a tablespace inherently involves using machine memory units, accordingly, Applicant submits that it is not necessary to insert "computer implemented method" as suggested in the Office Action has been considered but is not persuasive. Response: The basis is set forth in a two-prong test of:

(1) whether the claimed subject matter is directed to a "practical application"; or

(2) whether the invention produces "a useful, concrete and tangible result.", that is, whether the claimed subject matter is applied in a practical manner to produce a useful result. "[C]ertain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application, i.e., 'a useful, concrete and tangible result.' (State Street, 149 F.3d 1373, 47 USPQ2d at 1600-01 (citing Alppat, 33 F.3d 1544, 31 USPQ2d at 1557)).

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract ideas, law of nature, natural phenomena) that do not apply, involve, use, or advance technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

(A) In the present case, claims 12-20 recite an abstract idea only. The recited method and steps of the claim merely, receiving a backup copy, reading log records, applying log records, building new table data pages, scanning new table data pages, and updating the first database table do not apply, involve, use, or advance the technological arts since all of the recited method steps can be performed in the mind of the user or by use of a pencil and paper. These steps only constitute an idea of how to recover a database table. The claims do not have a computer performing the method in the preamble or a user receiving a backup copy at the computer or reading log records at the computer or applying log records at the computer or building one or more records from the one or more database table pages at the computer or updating the first database table at the computer.

In addition, for a claimed invention to be statutory, it must produce a useful, concrete, and tangible result. In the present case, the claimed invention produces a method for presenting and paying a bill (i.e., repeatable) used in accessing the information, preparing the bill, sending the bill, and paying the bill (i.e., useful and tangible).

Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, claims 12-20 are deemed to be directed to non-statutory subject matter.

With respect to the rejection under 35 U.S.C § 101, the Examiner asserts that the claimed invention does not fall within the technological arts because no form of technology is disclosed or claimed.

A database by definition is a collection of data stored on a computer storage medium, such as a disk, that can be used for more than one purpose. A disk is merely a storage device that can be used to store information, files, or data.

Issue no. 2; Applicant argues: Sockut et al does not disclose, suggest, or teach to recover a database table without recovering the tablespace as claimed in independent claims 1, 12, and 17 has been considered but is not persuasive. Response: It is interpreted Sockut teaches recovering a database table without recovering the tablespace in col. 2, lines 4-11, col. 3, lines 61-67, and col. 4, lines 1-17 –"the reorganization copies data from an old (original area fro the table space to a new area for the table space in reorganized form" (there is nothing interpreted as being mentioned about recovering the tablespace).

In conclusion: It is suggested Applicant overcome the rejections in particular of the method claims 12-20 for the reason(s) addressed above and to add the allowable features in the independent claims 12 and 17 to make them allowable too.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiries

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 703-308-7064. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 703-308-1038. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

E. Colbert
September 11, 2004

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